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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,189	10/27/2003	Joo W. Kim	632-001	4297

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EXAMINER

STITZEL, DAVID PAUL

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/695,189	Applicant(s) KIM, JOO W.	
	Examiner David P. Stitzel, Esq.	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-18 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 19-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/27/03</u> . | 6) <input type="checkbox"/> Other: _____ |

OFFICIAL ACTION

Acknowledgment of Receipt

The new Examiner of record acknowledges receipt of the Applicants' Election, with traverse, of Invention II, encompassing claims 12-18, which was filed on April 6, 2006, in response to the Official Action mailed on February 28, 2006.

Restriction/Election

Applicant's traversal of the aforementioned restriction requirement on the grounds that said restriction requirement is improper and that a prior art search and examination of the claims of the inventions as set forth in Inventions I through IV would not impose a serious search burden, is duly noted. However, a proper prima facie case of undue search burden associated with a prior art search and examination of the claims of the separate, distinct and independent inventions of Groups I through IV has previously been established in the aforementioned Official Action. More specifically, a combinatory antimicrobial immixture as claimed in Invention II can be incorporated into another product that is materially different from the deodorant stick products claimed in Inventions I and III, and the deodorant composition claimed in Invention IV. As a result, the restriction requirement is deemed proper and therefore made FINAL.

Status of Claims

Claims 1-11 and 19-31 are withdrawn from further consideration as being directed to a non-elected invention. As a result, claims 12-18 are currently pending and therefore examined herein on the merits for patentability.

Claim Rejections - 35 U.S.C. § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. § 112, which forms the basis of the claim rejections as set forth under this particular section of the Official Action:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. With respect to claim 18, confusion exists as to what constitutes “‘essentially free’ of propylene glycol?” More specifically, the phrase “essentially free” is a relative term that renders claim 18 indefinite. The phrase “essentially free” is not defined within said claim, the instant specification does not appear to provide a standard for ascertaining the requisite degree of what constitutes “‘essentially free’ of propylene glycol,” and one of ordinary skill in the art would not be reasonably apprised of the scope of the claimed invention.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of the appropriate paragraph of 35 U.S.C. § 103, which forms the basis of the obviousness rejections as set forth under this particular section of the Official Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 12-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,516,510 (hereinafter the Beilfuss '510 patent) in view of U.S. Patent 5,736,574 (hereinafter the Burnier '574 patent) and Madhavan BN, "Final Report on the Safety Assessment of Bisabolol," International Journal of Toxicology, Volume 18, Supplement 3, pp. 33-40 (1999) (hereinafter the Madhavan publication).

With respect to claims 12-18 of the instant application, the Beilfuss '510 patent teaches a synergistic antimicrobial deodorant composition comprising: an effective amount of one or more glycerin monoalkyl ethers, namely 2-ethylhexylglycerin (a.k.a., 3-[(2-ethylhexyl)oxy]-1,2-propanediol, 1-(2-ethylhexyl) glyceryl ether, and Sensiva); and an effective amount of one or more sesquiterpene alcohols, namely farnesol; wherein the effective amount of said 2-ethylhexylglycerin is from about 0.01 wt. % to about 20 wt. %; wherein the effective amount of said farnesol sesquiterpene alcohol is from about 50:1 to about 1:50 based on a ratio of said 2-ethylhexylglycerin to said farnesol sesquiterpene alcohol; wherein said synergistic antimicrobial composition exhibits efficacious bactericidal properties against not only gram-negative bacteria (i.e., *Proteus mirabilis*, *Klebsiella pneumoniae*, and *Enterobacter gergoviae*), but also odor

causing gram-positive bacteria (i.e., *Staphylococcus aureus*, *Staphylococcus epidermidis*, and *Micrococcus luteus*) (abstract; columns 1-5; claims 1-6).

The Beilfuss '510 patent does not explicitly teach that said synergistic antimicrobial composition is essentially free of propylene glycol, as claimed in claim 18 of the instant application. The Beilfuss '510 patent does not explicitly teach said synergistic antimicrobial composition comprises α -bisabolol as said sesquiterpene alcohol, as claimed in claims 12, 14 and 15 of the instant application.

However, Burnier '574 patent teaches a synergistic antimicrobial deodorant composition comprising: an effective amount of one or more glyceryl monoalkyl ethers, namely 2-ethylhexylglycerin (a.k.a., 3-[(2-ethylhexyl)oxy]-1,2-propanediol, 1-(2-ethylhexyl) glyceryl ether, and Sensiva); and any other additional ingredient typically used in cosmetic and dermatological compositions; wherein said synergistic antimicrobial composition exhibits efficacious bactericidal properties against not only gram-negative bacteria (i.e., *Escherichia coli*, and *Pseudomonas aeruginosa*), but also odor causing gram-positive bacteria (i.e., *Staphylococcus aureus*, and *Enterobacter faecalis*); wherein incorporation of propylene glycol within said synergistic antimicrobial deodorant composition is explicitly discouraged because propylene glycol was known to those of ordinary skill in the art at the time the instant application was filed to cause skin irritations and skin allergies (column 1, lines 23-29; column 3, lines 19-32, 36-44 and 53-61; column 4, lines 2, 3 and 20-23; claims 1 and 21).

However, the Madhavan publication teaches a synergistic antimicrobial deodorant composition comprising an effective amount of a sesquiterpene alcohol, namely α -bisabolol; wherein the effective amount of said α -bisabolol sesquiterpene alcohol is from about 0.01 wt. %

to about 1 wt. %; wherein said α -bisabolol sesquiterpene alcohol is typically used in cosmetic and dermatological compositions as a skin conditioning agent, an anti-inflammatory agent and an epidermal penetration enhancer; wherein said α -bisabolol sesquiterpene alcohol exhibits bacteriotoxic effects against gram-negative bacteria (i.e., *Salmonella typhimurium*) (page 33, column 2, lines 8-16 and 39-40; page 35, Table 1; page 37, column 1, lines 40-42; page 38, column 1, last paragraph; page 39, column 1, lines 8-11 and 46-50; page 38, column 2, lines 1-3).

It would have been prima facie obvious to one of ordinary skill in the art at the time the instant application was filed not to incorporate propylene glycol into the synergistic antimicrobial deodorant composition of the Beilfuss '510 patent, so as to avoid adverse skin irritations and skin allergies, as taught by the Burnier '574 patent. One of ordinary skill in the art would have been motivated not to incorporate propylene glycol into the synergistic antimicrobial deodorant composition of the Beilfuss '510 patent, since the Burnier '574 patent explicitly discourages the incorporation of propylene glycol into synergistic antimicrobial deodorant compositions because propylene glycol was known to those of ordinary skill in the art at the time the instant application was filed to cause skin irritations and skin allergies.

It would have been prima facie obvious to one of ordinary skill in the art at the time the instant application was filed to modify the synergistic antimicrobial deodorant composition of the Beilfuss '510 patent, by incorporating either in place of, or in addition to the farnesol sesquiterpene alcohol taught therein, the α -bisabolol sesquiterpene alcohol of the Madhavan publication. One of ordinary skill in the art would have been motivated to incorporate said α -bisabolol sesquiterpene alcohol either in place of, or in addition to the farnesol sesquiterpene

alcohol, since the Beilfuss '510 patent teaches incorporating one or more naturally occurring antimicrobial agents, such as sesquiterpene alcohols, into said synergistic antimicrobial deodorant composition, and the Madhavan publication teaches that said α -bisabolol sesquiterpene alcohol exhibits bacteriotoxic effects against gram-negative bacteria (i.e., *Salmonella typhimurium*)

It would have been prima facie obvious to one of ordinary skill in the art at the time the instant application was filed to modify the synergistic antimicrobial deodorant composition of the Beilfuss '510 patent, by incorporating therein any other additional ingredient typically used in cosmetic and dermatological compositions as taught by the Burnier '574 patent, such as an α -bisabolol sesquiterpene alcohol, since the Madhavan publication teaches that said α -bisabolol sesquiterpene alcohol is typically used in cosmetic and dermatological compositions as a skin conditioning agent, an anti-inflammatory agent and an epidermal penetration enhancer.

One of ordinary skill in the art at the time the instant application was filed would have had a reasonable expectation of success in modifying the synergistic antimicrobial deodorant composition of the Beilfuss '510 patent to include an antimicrobial α -bisabolol sesquiterpene alcohol therein, as taught by the Madhavan publication, while not incorporating propylene glycol therein thereby avoiding adverse skin irritations and skin allergies associated therewith, as taught by the Burnier '574 patent, especially since all three of the aforementioned references are directed to cosmetic and dermatological compositions in general, and more specifically directed to synergistic antimicrobial deodorant compositions.

Conclusion

Claims 12-18 are rejected because the claimed invention would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made since each and every element of the claimed invention, as a whole, would have been reasonably suggested by the teachings of the cited prior art references.

Remarks

The following is a prior art scientific journal article publication made of record and considered pertinent to the Applicant's disclosure, but is not however currently relied upon in construing the claim rejections as set forth herein:

- Moura NF, Simionatto E, Porto C, Hoelzel SCS, Dessoy ECS, Zanatta N, Morel AF, "Quinoline Alkaloids, Coumarins and Volatile Constituents of *Helietta longifoliata*," Plant Med, Vol. 68, pp. 631-634 (2002) (an essential oil comprising 80 wt. % antimicrobial sesquiterpenes, and more specifically approximately 8 wt. % antibacterial α -bisabolol and epi- α -bisabolol as major constituents therein, which exhibited efficacious antibacterial properties against not only gram-negative bacteria (i.e., *Klebsiella pneumoniae*, *Salmonella setubal*, and *Escherichia coli*), but also odor causing gram-positive bacteria (i.e., *Staphylococcus aureus*, *Staphylococcus epidermidis*, and *Micrococcus luteus*).

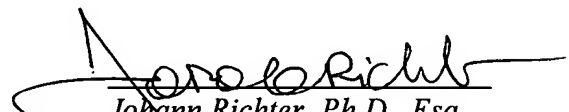
Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to David P. Stitzel, M.S., Esq. whose telephone number is 571-272-8508. The Examiner can normally be reached on Monday-Friday, from 7:30AM-6:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Johann Richter, Ph.D., Esq., can be reached at 571-272-0646. The central fax number for the USPTO is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published patent applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished patent applications is only available through Private PAIR. For more information about the PAIR system, please see <http://pair-direct.uspto.gov>. Should you have questions about acquiring access to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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